ABSTRACT

An apparatus and methods are provided for monitoring a well and for obtaining fluid samples from below the ground. The apparatus includes a single-piece, extruded plastic well stock that extends from the surface of the ground to the lowest sampling depth. Plural sampling intervals are defined between the surface and the lowest sampling depth. Sampling intervals are defined by isolating sections of the borehole by using packers that seal the annular space between the well stock and the borehole. The well stock includes plural longitudinal chambers. Inlet holes are put into the well stock so that inlets for each interval admit fluid to only one longitudinal chamber. Inert sealant is injected below inlets to prevent fluid from spreading below a desired level. Instruments are placed into the longitudinal chambers to monitor fluids in the chambers or to retrieve samples, or alternatively, the well stock can be removed to obtain samples.